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Patent Claims

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2. / Cardiac pacemaker according to claim 1,
characterised in that the device for modulating

individual stimulation intervals (ESI) carries out the alternating change repeating it periodically at intervals of a plurality of pulses.

3. Cardiac pacemaker according to claim 1,
5 **characterised in that** the device for modulating individual stimulation intervals (ESI) carries out the alternating change ($-\Delta\text{ESI}$, $+\Delta\text{ESI}$) continuously.

4. Cardiac pacemaker according to one of claims 1 to
10 3, **characterised in that**, as the measuring variable for determining the electric restitution, the duration of the action potential (APD) of the myocardium or the time interval between the stimulation pulse and the T wave in the ECG(ST) or the QRS complex and T wave in
15 the ECG(QT) is used.

5. Cardiac pacemaker according to one of claims 1 to
4, **characterised in that** the median value of the measuring variable (APD_m, ST_m or QT_m) determining the
20 electric restitution is calculated over a plurality of stimulation intervals.

6. Cardiac pacemaker according to one of claims 1 to
5, **characterised in that** the changes, dependent on the
25 respective change in the stimulation interval (ΔESI), of the measuring variable determining the electric restitution are stored and in that their median value (ΔAPD_m or ΔST_m or ΔQT_m) is determined over a plurality of change cycles.

7. Cardiac pacemaker according to one of claims 1 to
6, **characterised in that**, to evaluate the change in
the measuring variable, a dimensionless variable of
the 25 electric restitution is used.

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8. Cardiac pacemaker according to claim 7, **characterised in that**, as the dimensionless variable of the electric restitution, the gradient of the electric restitution (ERG) is calculated by forming the quotient $\Delta\text{APD}/\Delta\text{ESI}$ or $\Delta\text{STm}/\Delta\text{ESI}$ or $\Delta\text{QTm}/\Delta\text{ESI}$, or the relative change in the electric restitution by forming the quotient $\Delta\text{APDm}/\text{APDm}$ or $\Delta\text{STm}/\text{STm}$ or $\Delta\text{QTm}/\text{QTm}$.

9. Cardiac pacemaker according to claim 1 to 8, **characterised in that** the set value(ERGs) is predetermined by the value of the gradient or of the relative change in the electric restitution in the body's state of rest.

10. Cardiac pacemaker according to claim 5, **characterised in that**, in order to adapt the set value (ERGs) to individual fluctuations in the electric restitution, the median duration of the stimulation interval is fixed by external programming in the patient's state of rest and the value measured in this rest phase is stored as an absolute set value (ERGs).

11. Cardiac pacemaker according to claim 9, **characterised in that**, in order to adapt the set value (ERGs) to longer-term fluctuations of the electric restitution, the rest state of the patient is recognised by means of a sensor and the median duration of the stimulation interval is adjusted and the stored set value (ERGs) is replaced by the value measured in the detected rest phase.

12. Cardiac pacemaker according to one of claims 1 to 9, **characterised in that**, to compensate for the frequency-dependent changes in the detection of the T waves, the set value (ERGs) is altered in dependence on the duration of the stimulation interval.

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13. Cardiac pacemaker according to one of claims 1 to
8, **characterised in that** the median duration of the
stimulation interval is controlled in such a way that
it rises if the difference between the restitution 30
5 gradient and the set value falls below a negative
threshold value and drops if the difference exceeds a
positive threshold value.

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